

THE PEAVEY TRI-FLEX™ SYSTEM



OPERATING GUIDE FOR TRI-FLEX™ SOUND SYSTEM

One of the most consistent and frustrating problems encountered by traveling performers is the lack of physical space available within the performing environment.

Previous attempts to remedy this problem have simply offered scaled down versions of existing systems. The results have been acceptable, but with many trade-offs. The smaller systems usually suffer from lack of low frequency response and quite often are very inefficient, requiring a large amount of peripheral equipment to make up for their lack of design efficiency.

The new Peavey Tri-Flex™ system addresses this particular problem in a very unique and effective manner.



It is recognized that frequencies below 250 Hz are essentially nondirectional, making it very difficult to locate the source from which frequencies in this region originate (see figure 1).

The Tri-Flex™ is a three-way system featuring one low frequency nondirectional enclosure to reproduce the frequencies below 250 Hz, and two satellite cabinets for the frequencies above 250 Hz.

The low frequency enclosure is a special slot-radiator design featuring two heavy-duty 12 inch transducers in a unique dual cone configuration for maximum low frequency output.

The two satellite enclosures measure an incredibly small 14" high by 9½" wide by 6¼" deep. Each enclosure utilizes one 8 inch heavy-duty midrange cone transducer for the midbass frequency region and one 4 inch horn super tweeter for the high frequency section.

A three-way passive crossover network provides all necessary filtering functions and high pass attenuation to render the Tri-Flex™ system maximally flat. Part of this high quality crossover is housed within the low frequency enclosure and provides bi-amp as well as full range connections.

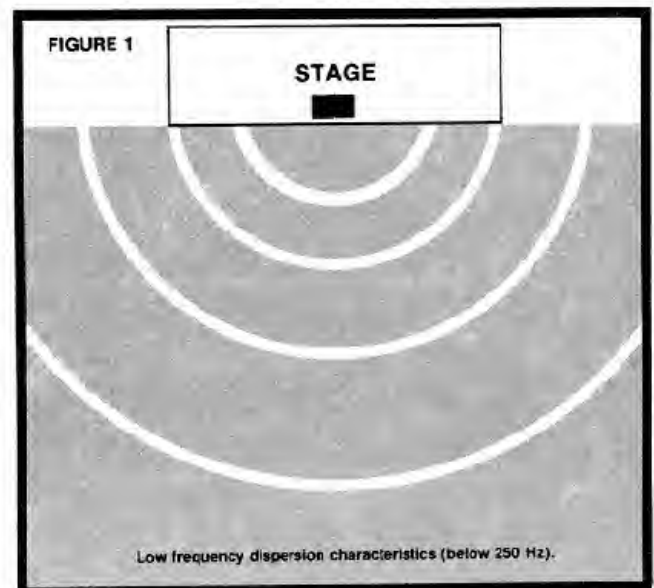
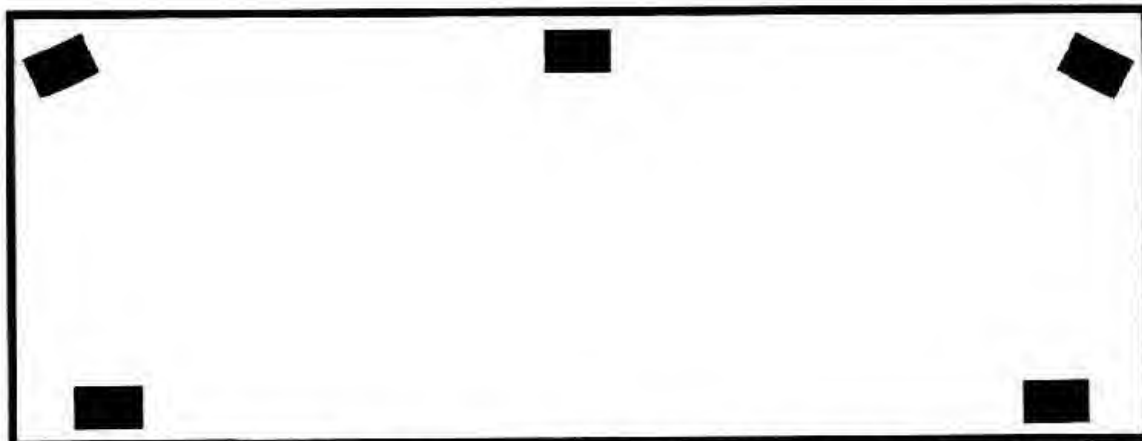
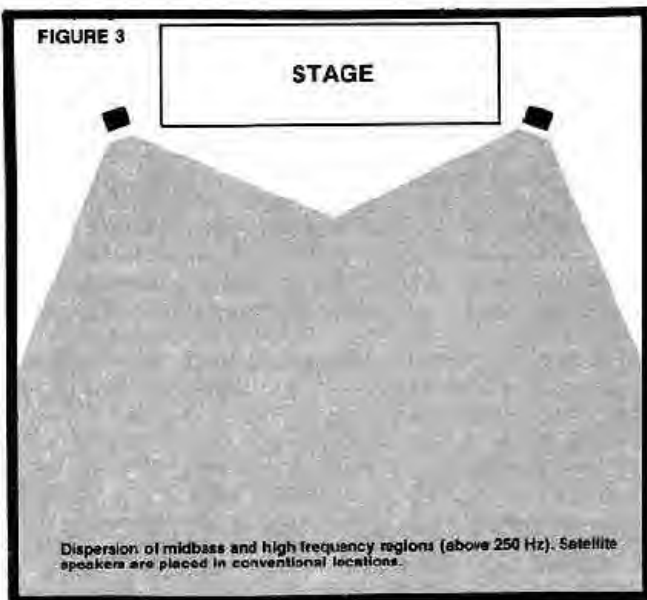


FIGURE 2



Since frequencies below 250 Hz are essentially non-directional, the low frequency "sub woofer" may be placed in almost any convenient location within the performing environment. (Black rectangles represent possible low frequency enclosure locations.)

FIGURE 3



SYSTEM SET-UP

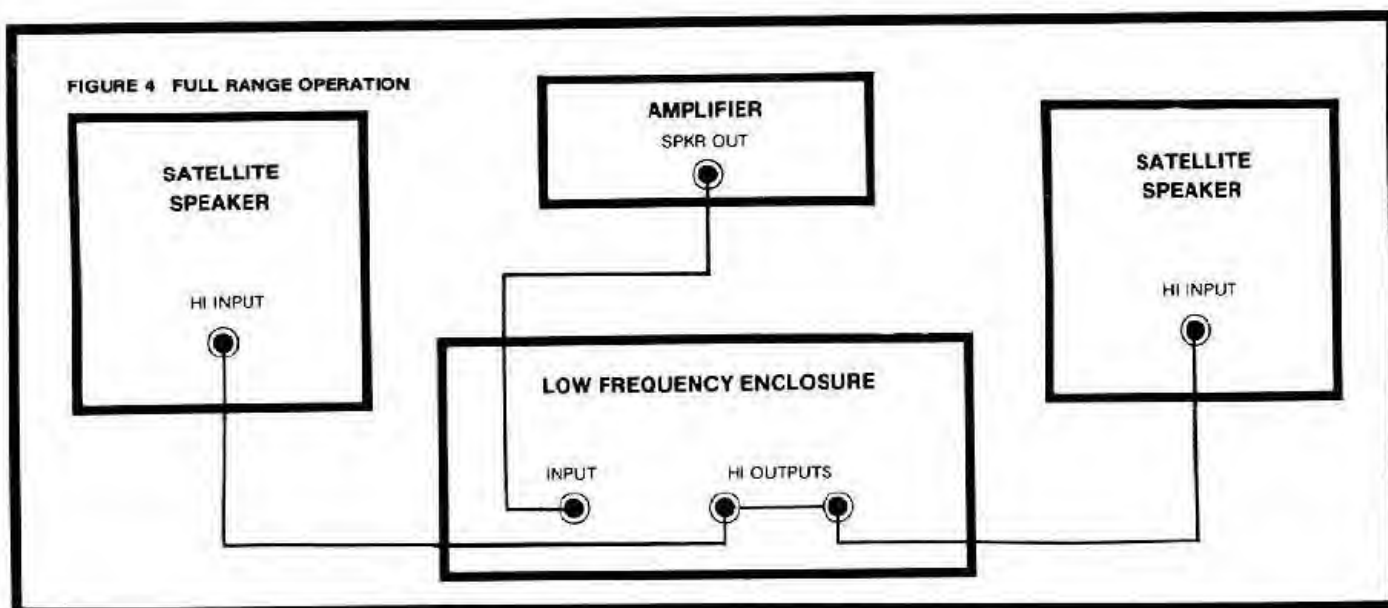
Speaker Enclosure Placement

The low frequency enclosure may be placed in almost any conventional location within the performing area. Since low frequencies (below 250 Hz) are essentially nondirectional, its location is not critical (see figure 2).

For maximum low frequency coupling and optimum system performance, the low frequency enclosure should be placed on the floor with the "slot-radiator" oriented downward and toward the listening audience.

The satellite speakers should be mounted on the tripod stands (included) and elevated to the approximate "ear level" of the audience. These high frequency enclosures should be placed at conventional stage-side locations....to the side and slightly in front of the forwardmost microphone location (see figure 3).

FIGURE 4 FULL RANGE OPERATION



Full Range Operation

A passive crossover network is housed inside the low frequency enclosure, providing the inputs for the Tri-Flex™ system.

For full range operation, connect speaker cables as shown in figure 4. We recommend speaker cable with #18 gauge or larger wire size.

Bi-Amp Operation

Bi-amping the Tri-Flex™ will provide greater system reliability, increased power handling and lower distortion levels with a resulting increase in system efficiency and performance (see figure 5).

NOTE

THE RECOMMENDED CROSSOVER FREQUENCY FOR BI-AMPING THE TRI-FLEX™ IS 250 Hz. IF A STANDARD CROSSOVER NETWORK IS UTILIZED FOR THE CROSSOVER FUNCTION, AN 18 dB PER OCTAVE ROLL-OFF RATE IS NECESSARY FOR OPTIMUM PERFORMANCE FROM THE TRI-FLEX™.

FIGURE 5 BI-AMP OPERATION

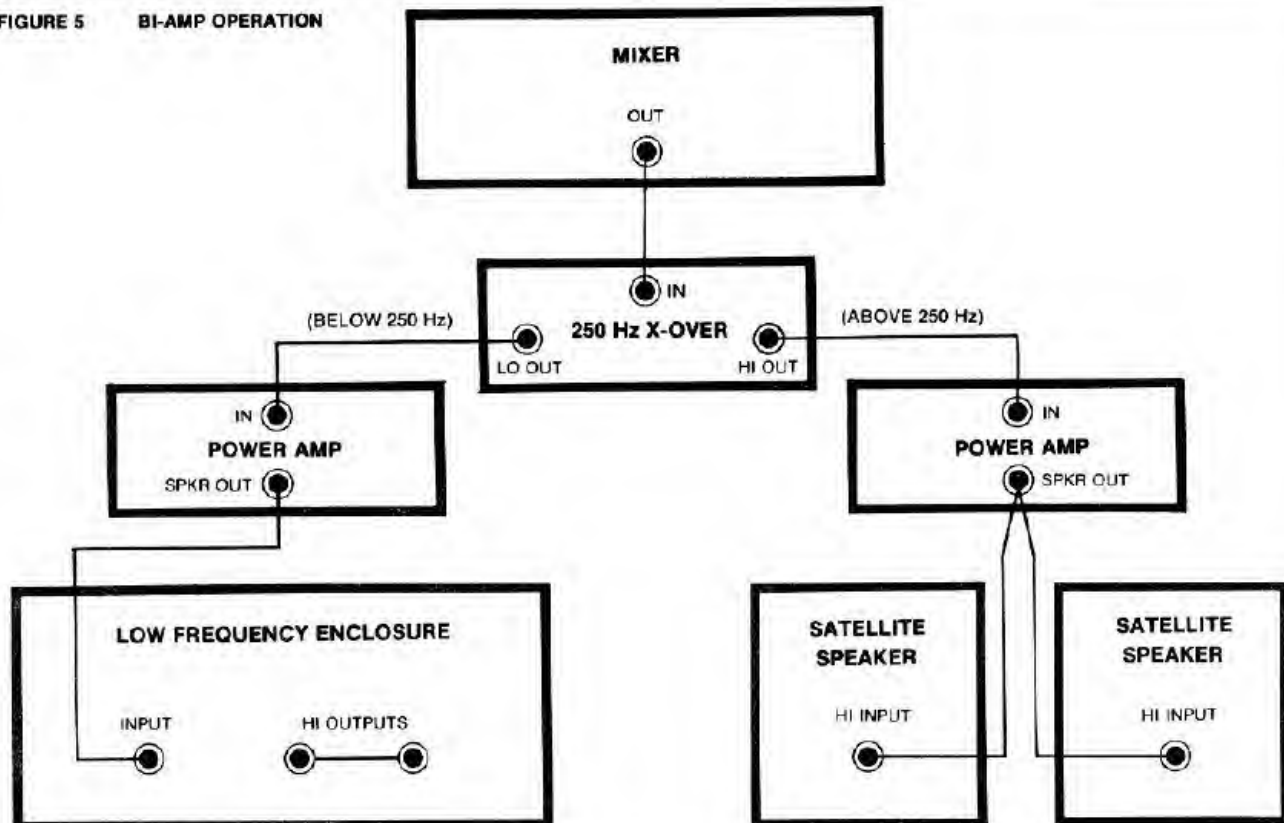
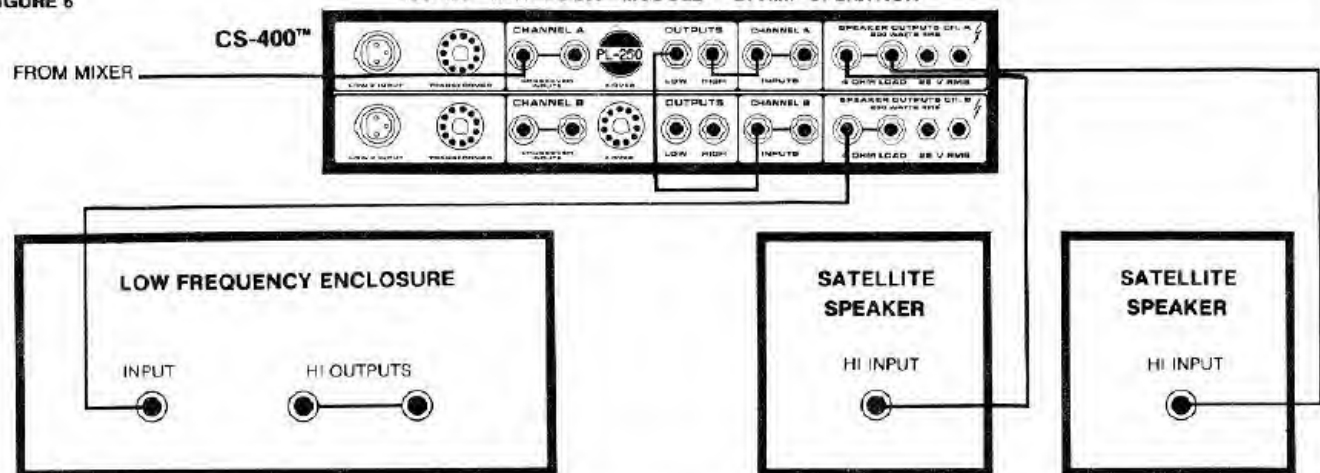


FIGURE 6

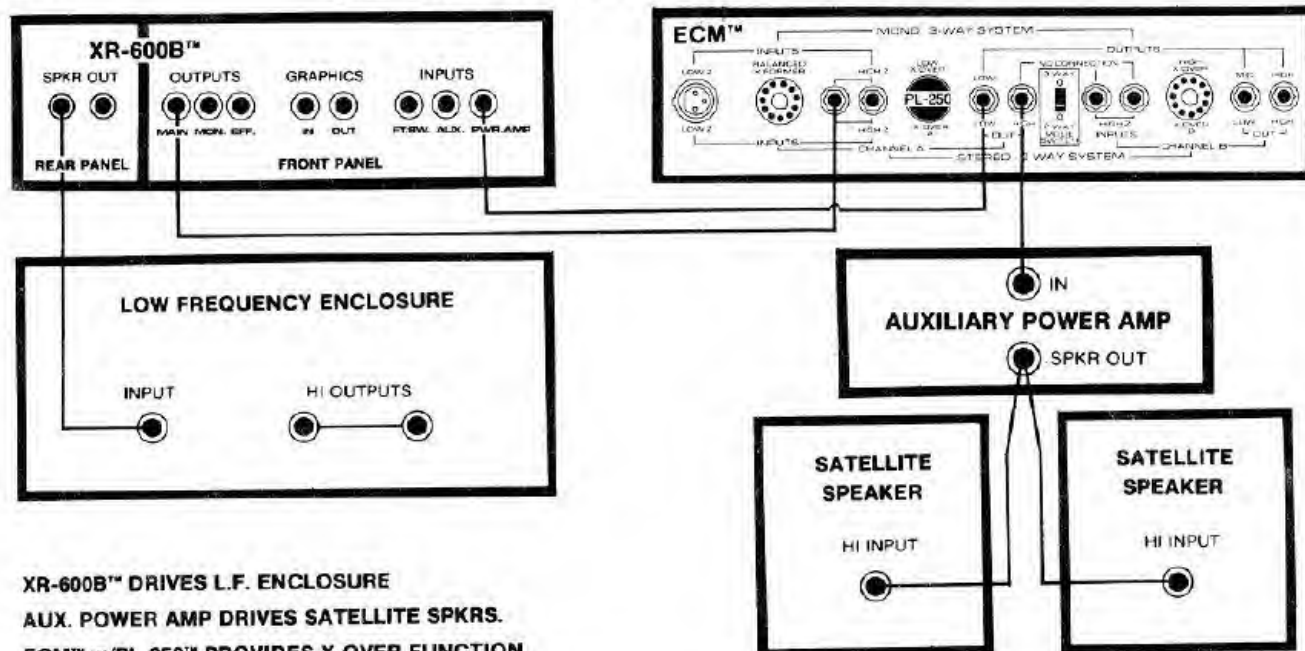
CS-400™ WITH PL-250™ MODULE — BI-AMP OPERATION



For optimum performance, we recommend the use of a Peavey PL-250™ plug-in crossover module with a Peavey CS-400™ power amplifier. For bi-amp operation with Peavey mixer amps or other manufacturers power amps, a Peavey ECM™ will allow use of the PL-250™ crossover module (see figures 6 and 7).

FIGURE 7

BI-AMP OPERATION WITH XR-600B™, ECM™ AND AUXILIARY POWER AMP



DANGER
 EXPOSURE TO EXTREMELY HIGH NOISE LEVELS MAY CAUSE A PERMANENT HEARING LOSS. INDIVIDUALS VARY CONSIDERABLY IN SUSCEPTIBILITY TO NOISE INDUCED HEARING LOSS, BUT NEARLY EVERYONE WILL LOSE SOME HEARING IF EXPOSED TO SUFFICIENTLY INTENSE NOISE FOR A SUFFICIENT TIME.

THE U.S. GOVERNMENT'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) HAS SPECIFIED THE FOLLOWING PERMISSIBLE NOISE LEVEL EXPOSURES:

DURATION PER DAY IN HOURS

8
6
4
3
2
1½
1
½
¼ or less

SOUND LEVEL dBA, SLOW RESPONSE

90
92
95
97
100
102
105
110
115

ACCORDING TO OSHA, ANY EXPOSURE IN EXCESS OF THE ABOVE PERMISSIBLE LIMITS COULD RESULT IN SOME HEARING LOSS.

EAR PLUGS OR PROTECTORS IN THE EAR CANKE OR OVER THE EARS MUST BE WORN WHEN OPERATING ANY AMPLIFICATION SYSTEM IN ORDER TO PREVENT A PERMANENT HEARING LOSS IF EXPOSURE IS IN EXCESS OF THE LIMITS SET FORTH ABOVE. TO INSURE AGAINST POTENTIALLY DANGEROUS EXPOSURE TO HIGH SOUND PRESSURE LEVELS, IT IS RECOMMENDED THAT ALL PERSONS EXPOSED TO EQUIPMENT CAPABLE OF PRODUCING HIGH SOUND PRESSURE LEVELS SUCH AS THIS AMPLIFICATION SYSTEM BE PROTECTED BY HEARING PROTECTORS WHILE THIS UNIT IS IN OPERATION.

CAUTION
 THIS TRANSDUCER/ENCLOSURE HAS BEEN DESIGNED TO ACCEPT THE POWER (WATTAGE) FOR PLAYING MODERN MUSIC. HOWEVER, EXTENDED OPERATION AT ABSOLUTE MAXIMUM POWER LEVELS OF THE ASSOCIATED PREAMP(S) POWER AMP(S) COULD DAMAGE THIS TRANSDUCER/ENCLOSURE. PLEASE BE AWARE THAT MAXIMUM POWER CAN BE OBTAINED WITH VERY LOW SETTINGS OF THE GAIN CONTROLS IF THE INPUT SIGNAL IS VERY STRONG.

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be retained for future reference.
3. Obey all cautions in the operating instructions and on the back of the unit.
4. All operating instructions should be followed.
5. This product should not be used near water, i.e. a bathtub, sink, swimming pool, wet basement, etc.
6. This product should be located so that its position does not interfere with its proper ventilation. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
7. This product should not be placed near a source of heat such as a stove, heater, radiator or another heat producing appliance.
8. Disconnect the power supply of the type marked on the unit dependent on the power supply cord.
9. Never direct off the ground pin on the power supply cord. For more information on grounding, write for our free booklet "Shock Hazard and Grounding."
10. Power supply cords should always be handled carefully. Never walk or place equipment on power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the cord exits the unit.
11. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
12. Metal parts can be cleaned with a damp rag. The vinyl covering used on some units can be cleaned with a damp rag, or an ammonia based household cleaner if necessary.
13. Cords should be labeled so that liquids do not pollute and liquids are not spilled into the unit through the ventilation holes or any other openings.
14. This unit should be checked by a qualified service technician if:
 - A. The power supply cord or plug has been damaged.
 - B. Anything has fallen or been spilled into the unit.
 - C. The unit does not operate correctly.
 - D. The unit has been dropped or the enclosure damaged.
15. The user should not attempt to service this equipment. All service work should be done by a qualified service technician.

NOTE

THE CONFIGURATION SHOWN IN FIGURE 6 MAY BE UTILIZED WITH ALMOST ANY MIXER/AMP OR PACKAGED PA SYSTEM WHICH FEATURES A PREAMP OUTPUT FROM THE MIXER SECTION, AND A POWER AMP INPUT. THE LOW FREQUENCY ENCLOSURE SHOULD ALWAYS BE DRIVEN BY THE AMPLIFIER WITH THE GREATEST POWER OUTPUT.

PEAVEY ELECTRONICS CORPORATION

711 A Street/Meridian, Mississippi 39301

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